



STATE OF NEW YORK  
OFFICE OF THE ATTORNEY GENERAL

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DIVISION OF SOCIAL JUSTICE  
ENVIRONMENTAL PROTECTION BUREAU

March 26, 2019

*Via submission to Regulations.gov*  
Andrew Wheeler  
Administrator  
United States Environmental Protection Agency  
1200 Pennsylvania Avenue NW  
Washington, DC 20460

**RE: Center for Food Safety Petition Seeking Rulemaking or Formal Agency  
Interpretation for Planted Seeds Treated with Systemic Insecticides  
(83 Fed. Reg. 66,260)**

The New York Attorney General (NYAG) submits these comments pursuant to the request of the United States Environmental Protection Agency (EPA) for public comment on the petition from the Center for Food Safety (CFS) requesting an EPA rulemaking or formal agency interpretation for planted seeds treated with systemic insecticides (the Petition). *See* 83 Fed. Reg. 66,260 (Dec. 26, 2018). For the reasons discussed below, NYAG agrees that EPA has improperly applied the “treated article exemption” in exempting seeds treated with certain insecticides from the registration and labeling requirements of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and supports CFS’s request that EPA enforce FIFRA’s requirements for seed products treated with such pesticides. This position derives from NYAG’s view -- previously expressed in formal comments submitted to EPA as part of EPA’s registration review for clothianidin and thiamethoxam, two neonicotinoid pesticides -- that EPA’s January 5, 2017 *Preliminary Bee Risk Assessment to Support the Registration Review of Clothianidin and Thiamethoxam* (Preliminary Bee Risk Assessment or Assessment) failed to adequately assess the unreasonable adverse risks posed by the use of these pesticides as seed treatments, by far the predominant agricultural use of these chemicals.

EPA has opined that treated seeds may be entitled to exemption from FIFRA registration requirements where their risk is adequately assessed in the registration process for the pesticides with which the seeds are treated. Thus, the exemption should not apply to seeds treated with clothianidin and thiamethoxam, since the registration process for these pesticides to date has failed to examine and address the risks to pollinators from exposure to these pesticides in the seed dust released into the environment during the planting of treated seeds, a mechanism known

as “dust-off.” In addition, any other seed treated with a registered pesticide for which EPA has failed to assess risks from planting, including but not limited to dust-off, also should not fall under this exemption.

## **I. New York’s Interest**

The economy of New York State includes a robust agricultural sector, with some 36,000 farms covering nearly one-quarter of the state’s land area.<sup>1</sup> The State is a leading producer of specialty crops that require or benefit from pollination by insects, such as apples, pears, cherries, strawberries, pumpkins, squash, beans and cucumbers. These pollination-dependent crops contribute \$1.2 billion annually to the state’s agricultural economy.<sup>2</sup>

Some crops widely grown in New York, such as corn, involve the use of substantial quantities of neonicotinoid pesticides, including use of treated seeds. Indeed, based on EPA’s own estimation that nearly all corn seed planted in the United States is treated with clothianidin or thiamethoxam,<sup>3</sup> virtually all of the approximately one million acres of corn grown annually across New York likely is planted with seeds treated with one of these two neonicotinoids,<sup>4</sup> despite the fact that clothianidin is not registered for agricultural use by the New York State Department of Environmental Conservation (NYDEC).<sup>5</sup>

At the same time, many of New York’s other economically important crops depend upon pollination by bees. Both commercial and wild bee colonies have experienced the precipitous loss over the past several years. From 2017 to 2018 alone, New York beekeepers experienced a

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<sup>1</sup> Office of the New York State Comptroller, Agriculture in New York State (Sept. 2018), at 1, available at <https://www.osc.state.ny.us/reports/economic/agriculture-report-2018.pdf>.

<sup>2</sup> New York State Department of Environmental Conservation and New York State Department of Agriculture and Markets, *New York State Pollinator Protection Plan Update* (June 2018) (“*Plan Update*”), at 8, available at <https://www.agriculture.ny.gov/Press%20Releases/pollinator-report.pdf>.

<sup>3</sup> EPA, *Preliminary Bee Risk Assessment to Support the Registration Review of Clothianidin and Thiamethoxam*, (Jan. 5, 2017), at 6-7, & Table 2.6, available at <https://www.regulations.gov/document?D=EPA-HQ-OPP-2011-0865-0173>. EPA estimates that 45-65% of all U.S. corn acres are planted with clothianidin treated seed and 26-45% of U.S. corn acres with thiamethoxam treated seed.

<sup>4</sup> USDA, National Agricultural Statistics Service, available at <https://quickstats.nass.usda.gov/results/A7A4336B-3873-36A4-B92B-2F7C8B97FB9C>. USDA estimates for New York State: 1,080,000 acres of corn planted with corn in NYS in 2015, 1,100,000 acres in 2016 and 1,000,000 acres in 2017.

<sup>5</sup> New York’s DEC has not registered clothianidin for any agricultural use, finding that the pesticide is “highly toxic to bees on an acute oral and contact basis.” NY DEC, *November 16, 2005 Letter Re: Withdrawal of Application for Registration of the New Product Poncho 600* (EPA Reg. No. 264-789-7501), *Which Contains the New Active Ingredient Clothianidin*.

40.43% total annual colony loss,<sup>6</sup> and overall colony losses of commercial migratory bees based in the State have exceeded 70%.<sup>7</sup>

In an effort to address these catastrophic pollinator losses, in 2016 NYDEC and the New York State Department of Agriculture and Markets (NY Ag & Markets) developed the “New York State Pollinator Protection Plan,” which aims to “promote the health and recovery of pollinator populations in New York State in order to sustain the state’s robust agricultural economy and unparalleled natural resources.”<sup>8</sup> The Plan has been updated to reflect the numerous initiatives undertaken and proposed by various State entities seeking to alleviate this persistent problem. Despite these efforts, the updated Plan cites research at Cornell University confirming previous reports that approximately *half* the honey bee colonies present in New York were lost in each of the three previous years.<sup>9</sup>

## II. Background

### A. *The Treated Article Exemption*

Under FIFRA, all pesticides must be registered before being sold, distributed or used in the United States. 7 U.S.C. § 136a(a). The EPA Administrator may only register a pesticide if it will not cause “unreasonable adverse effects on the environment.” 7 U.S.C. § 136a(c)(5). FIFRA defines “unreasonable adverse effects on the environment” as “any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide. . . .” 7 U.S.C. § 136(bb).

FIFRA authorizes EPA to create exemptions from its registration requirements for “any pesticide which the Administrator determines either (1) to be adequately regulated by another Federal agency, or (2) to be of a character which is unnecessary to be subject to this subchapter in order to carry out the purposes of the subchapter.” 7 U.S.C. § 136w(b). In 1988, pursuant to this authority, EPA created an exemption for “treated articles,” which are “article[s] or substance[s] treated with, or containing, a pesticide to protect the article or substance itself (for example, paint treated with a pesticide to protect the paint coating, or wood products treated to protect the wood against insect or fungus infestation), if the pesticide is registered for such use.” 40 C.F.R. § 152.25(a).

The regulation does not mention pesticide-treated seeds, nor has any formal regulatory application of the exemption to such seeds been found. In 2003 EPA and its sister Canadian agency, the Pest Management Regulatory Agency, jointly issued a document comparing the two

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<sup>6</sup> Bee Informed Partnership, *2017/18 Total Annual All Colony Loss*, available at <https://bip2.beeinformed.org/loss-map/>.

<sup>7</sup> NY DEC & NY Ag. & Markets, *New York State Pollinator Protection Plan* (June 24, 2016), at 4, available at [http://www.dec.ny.gov/docs/administration\\_pdf/nyspollinatorplan.pdf](http://www.dec.ny.gov/docs/administration_pdf/nyspollinatorplan.pdf).

<sup>8</sup> *Id.* at 1.

<sup>9</sup> Plan Update, *supra* note 2, at 1.

agencies' regulation of pesticides used for seed treatment.<sup>10</sup> This document described the regulation of pesticide-treated seeds in the United States as follows:

For the purposes of FIFRA, pesticide-treated seeds are considered to be pesticides themselves because they are a mixture of substances that are intended to prevent, destroy, repel or mitigate a pest. In 1988, the EPA promulgated regulation 40 Code of Federal Regulations (CFR) 152.25(a) exempting certain treated articles (including treated seeds) from regulation under FIFRA provided that both of the following conditions are met:

- (a) the pesticide used for the treatment is registered for such use; and
- (b) the treatment is for the protection of the article or substance itself.

Importantly, the document went on to provide the reasoning for EPA's practice as follows:

*In issuing this regulation, the EPA reasoned that the risks of treated seeds that meet the above criteria could adequately be regulated by means of registration of the treating pesticide. In evaluating the risks of the seed treatment, the EPA could also evaluate the risks from exposure to the seed treated according to the label instructions and forgo the need for a separate evaluation and registration of the treated seed.*<sup>11</sup>

As explained below, the environmental risks posed by seeds treated with clothianidin and thiamethoxam have *not* been adequately assessed in the registration process for these pesticides. Therefore, using its own standard, EPA cannot apply the treated article exemption to seeds treated with these pesticides, or any other pesticides whose risks as a seed treatment have not been adequately assessed.

#### ***B. EPA's Registration and Registration Review of Clothianidin and Thiamethoxam***

Clothianidin and thiamethoxam, which were conditionally registered by EPA in 2003 and 1999 respectively,<sup>12</sup> are currently undergoing registration review pursuant to FIFRA's mandate that EPA review each registered pesticide by October 1, 2022, or 15 years after the first

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<sup>10</sup> Harmonization of Regulation of Pesticide Seed Treatment in Canada and the United States (Apr. 11, 2003), archived at [perma.cc/3MUH-B9VQ](https://perma.cc/3MUH-B9VQ).

<sup>11</sup> *Id.* at 1-2 (emphasis added).

<sup>12</sup> EPA, *Thiamethoxam Final Work Plan; Registration Review Case No. 7641* (June 2011), available at <https://www.regulations.gov/document?D=EPA-HQ-OPP-2011-0581-0024>; EPA, *Clothianidin Conditional Registration* (May 30, 2003), available at [https://www3.epa.gov/pesticides/chem\\_search/reg\\_actions/registration/fs\\_PC-044309\\_30-May-03.pdf](https://www3.epa.gov/pesticides/chem_search/reg_actions/registration/fs_PC-044309_30-May-03.pdf).

registration of a new pesticide active ingredient, whichever is later.<sup>13</sup> As part of the registration review, in 2017, EPA released for public comment its Preliminary Bee Risk Assessment.<sup>14</sup>

NYAG reviewed the Assessment and submitted our comments to EPA.<sup>15</sup> We found the Assessment to be materially deficient, particularly in its failure to perform an assessment of the risk to pollinators posed by dust-off of pesticide coating from treated seeds during planting, the primary agricultural use of such pesticides and a well-recognized unique route of exposure.

### ***C. Use and Impacts of Seeds Treated with Clothianidin and Thiamethoxam***

#### ***1. Seed Treatment Is the Predominant Use of Clothianidin and Thiamethoxam in the United States***

Clothianidin and thiamethoxam are neonicotinoid pesticides that affect the central nervous system of insects, resulting in nervous stimulation, paralysis and death for insects exposed to these chemicals. Neonicotinoids are highly toxic to non-target species including critical pollinators such as honey bees and other insects.

The 2017 Assessment revealed that seed treatments constitute by far the largest agricultural use of clothianidin and thiamethoxam in terms of annual pounds of active ingredient. According to the Assessment, the combined annual use of clothianidin and thiamethoxam for seed treatment is at least thirteen times greater than the combined annual use of the other reported agricultural methods of application, which include foliar spray and soil treatment.<sup>16</sup> The Assessment also showed the predominance of seed treatment use for major crops in terms of number of acres planted. For example, in 2016, for corn and soybean crops – the two most widely planted crops in the United States – EPA estimated on average that 66 million acres of treated corn seed were planted out of 94.1 million total acres planted (70% of national acres planted), while on average 15.1 million acres of treated soybean seed were planted out of 83.7 million total acres planted (18% of national acres planted).<sup>17</sup>

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<sup>13</sup> 7 U.S.C. § 136a(g)(1)(A)(iii).

<sup>14</sup> 82 Fed. Reg. 24,113 (May 25, 2017).

<sup>15</sup> July 31, 2017 Letter to Mr. Richard Dumas Re: Comments of the Attorney General of the State of New York on EPA's Preliminary Bee Risk Assessment to Support the Registration Review of Clothianidin and Thiamethoxam (82 Fed. Reg. 24,113). Although the letter was accepted by permission 7 days after the comment deadline, it was apparently not posted in the applicable EPA dockets (EPA-HQ-OPP-2011-0865 & EPA-HQ-OPP-2011-0581). A copy of the letter and the filing confirmation are attached hereto.

<sup>16</sup> Assessment, *supra* note 3, at 34-35, Tables 2.4, 2.5 (estimated annual usage of clothianidin and thiamethoxam applied via seed treatment from 2005-2014 is 2,250,000 pounds, whereas estimated annual usage of clothianidin and thiamethoxam applied via foliar or soil applications during that time is 146,000-168,000 pounds).

<sup>17</sup> *Id.*, at 35, Table 2.6.

## ***2. Dust from Seeds Treated with Clothianidin and Thiamethoxam Causes Adverse Effects on Non-Target Species Such as Bees***

It is well documented that pollinators are adversely affected by dust-off from neonicotinoid-treated seeds that occurs during planting. The Assessment itself cites to several studies that reflect the exposure impacts from seed coatings, including dust-off.<sup>18</sup> Additional field studies not included in the assessment also demonstrate that neonicotinoid exposure from planting treated seeds, including from dust-off, causes significant harm to pollinator health.<sup>19</sup>

### **III. The Environmental Risks Posed by Seeds Treated with Clothianidin and Thiamethoxam Have Not Been Adequately Assessed in the Registration or Registration Review of the Treating Pesticides**

Although the Assessment recognized that seed treatments are the predominant application method of clothianidin and thiamethoxam, and identified abraded seed coat dust as an “important route of exposure” and “a route of concern,”<sup>20</sup> it failed to examine the risks associated with contact with, and off-site movement of, seed coat dust and residue. Rather, EPA stated that “this exposure route was not quantitatively considered in this assessment.”<sup>21</sup> Further, with respect to on-field risks, EPA “assumed that bees are not present until after planting; therefore, contact exposures would not reasonably be expected to occur” and “exposure through consumption of residues in nectar and pollen [is] expected to be the dominant route.”<sup>22</sup> These assumptions are

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<sup>18</sup> Assessment at 42 & 362 (citing, for example, Forster, R. (2009). Bee poisoning caused by insecticidal seed treatment of maize in Germany in 2008. pp. 126 – 131 in P. A. Oomen & H. M. Thompson (eds.) *Hazards of Pesticides to Bees*, 10th International Symposium of the ICP-BR Bee Protection Group, Bucharest (Romania) (Oct. 8-10, 2008, Julius Kühn Arch 423); Krupke, C. H., Hunt, et al. (2012). Multiple routes of pesticide exposure for honey bees living near agricultural fields. *PLoS ONE* 7(1): e29268. Doi:10.1371/journal.pone.0029268; Tapparo, A. D., et al. (2012). Assessment of the environmental exposure of honey bees to particulate matter containing neonicotinoid insecticides coming from corn-coated seeds. *Environmental Science and Technology* 46: 2592-2599).

<sup>19</sup> Tsvetkov N., et al. (2017). Chronic exposure to neonicotinoids reduces honey bee health near corn crops. *Science* 356, 1395–1397; Woodcock B.A., et al. (2017). Country-specific effects of neonicotinoid pesticides on honey bees and wild bees. *Science* 356, 1393–1395; Marzaro, M., et al. (2011). Lethal aerial powdering of honey bees with neonicotinoids from fragments of maize seed coat. *Environ Sci Technol* 46:2592-2599; Girolami, V., et al. (2012). Fatal powdering of bees in flight with particulates of neonicotinoids seed coating and humidity implication. *J. Appl Entomol* 136:17-26; Greatti M. et al. (2006). Presence of the a.i. imidacloprid on vegetation near corn fields sown with Gaucho dressed seeds. *Bulletin of Insectology* 59(2):99-103; Samson-Robert, O. et al. (2017). Planting of neonicotinoid coated corn raises honey bee mortality and sets back colony development. *PeerJ* 5:e3670; DOI 10.7717/peerj.3670.

<sup>20</sup> Assessment at 7, 42.

<sup>21</sup> *Id.* at 7.

<sup>22</sup> *Id.* at 347, 48.

contrary to academic analyses that demonstrate the potential for bees to be exposed directly to seed coat dust both on- and off-field.<sup>23</sup>

As NYAG explained in its comments on the Assessment, EPA is mandated to assess the potential risks of all commonly recognized exposure routes. Clearly, an exposure route that results from what EPA itself cites as the predominant agricultural use of clothianidin and thiamethoxam by volume of active ingredient, should be assessed. To be sure, the recent substantial increase in neonicotinoid use is a reflection of the growing use of large-scale prophylactic seed treatment application on field crops.<sup>24</sup>

In addition to bees, the Assessment also failed to assess the risks of clothianidin and thiamethoxam exposure to non-bee pollinators including hover flies and bee flies (Bombyliidae family)<sup>25</sup> - demonstrated crop pollinators in agricultural settings. Researchers have found that non-target species also can be exposed to neonicotinoids from contaminated plants growing adjacent to agricultural fields, including monarch butterflies exposed to clothianidin-contaminated milkweed.<sup>26</sup> The Federal Register notice announced the availability of the Assessment by calling it the “Combined Preliminary Pollinator Risk Assessment for Clothianidin and Thiamethoxam,”<sup>27</sup> while EPA’s “Schedule for Review of Neonicotinoid Pesticides” refers to “preliminary pollinator-only risk assessments” for both clothianidin and thiamethoxam in 2017.<sup>28</sup> Thus, the scope of the Assessment should have included the risks from clothianidin and thiamethoxam, including via dust-off, to all affected pollinators, not just bees.

EPA justified its exclusion of seed treatment analysis by positing that it may take future mitigation measures that are not identified in the Assessment. After conceding that: “[e]xposure of bees to clothianidin and thiamethoxam via drift of abraded seed coat dust is considered a route

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<sup>23</sup> See, e.g., Krupke, C.H., J.D. Holland, E.Y. Long, and B.D. Eitzer. (2017). Planting of neonicotinoid-treated maize poses risks for honey bees and other non-target organisms over a wide area without consistent crop yield benefit. *Journal of Applied Ecology* doi: 10.1111/1365-2664.12924 (finding that “the overwhelming majority of honey bee foragers in our study area are likely to come in contact with neonicotinoid residues from planter dust.”)

<sup>24</sup> Douglas M.R. and J.F. Tooker. (2015). Large-scale deployment of seed treatments has driven rapid increase in use of neonicotinoid insecticides and preemptive pest management in U.S. field crops. *Environ. Sci. Technol.* 49, 5088–5097.

<sup>25</sup> Klein, A., C. Brittain, S.D. Hendrix, R. Thorp, N. Williams, and C. Kremen. (2012). Wild pollination services to California almond rely on semi-natural habitat. *Journal of Applied Ecology*, 49:723-732; Orford, K.A., I.P. Vaughan, and J. Memmott. (2015). The forgotten flies: the importance of non-syrphid Diptera as pollinators. *Proc. R. Soc. B* 282:20142934.

<sup>26</sup> Pecenka, J.R. and J.G. Lundgren. (2015). Non-target effects of clothianidin on monarch butterflies. *Sci. Nat.* 102:19. DOI 10.1007/s00114-015-1270-y

<sup>27</sup> 82 Fed. Reg. at 24,113.

<sup>28</sup> EPA’s Schedule for Review of Neonicotinoid Pesticides, available at <https://www.epa.gov/pollinator-protection/schedule-review-neonicotinoid-pesticides>

of concern given that bee kill incidents have been associated with planting of clothianidin- or thiamethoxam-treated corn,”<sup>29</sup> EPA continued:

*However, the Agency is working with different stakeholders to identify best management practices and to promote technology-based solutions that reduce this potential route of exposure. As such, this exposure route was not quantitatively considered in this assessment. (Emphasis added.)*

However, without having assessed the *risk* to bees from their contact with clothianidin and thiamethoxam through dust-off during planting, it is impossible for EPA to determine whether mitigation will reduce risk associated with exposure to treated seeds below levels of concern. Importantly, the Ninth Circuit Court of Appeals in *Pollinator Stewardship Council v. United States EPA*, No. 13-72346, 2015 U.S. App. LEXIS 19945, at \*17-21 (9th Cir. Nov. 12, 2015) rejected a similar mitigation in lieu of assessment approach by used by EPA. In that case, the court vacated EPA’s registration of another pesticide, sulfoxaflo, in part because EPA had improperly relied on un-assessed mitigation measures to justify its registration of sulfoxaflo, which EPA had previously classified as “very highly toxic to bees.”

Moreover, peer-reviewed studies raise concerns that mitigation measures envisioned by EPA may not be effective in reducing the risk of exposure.<sup>30</sup> While mitigation should certainly be part of the solution for reducing risks from pesticide use,<sup>31</sup> without a full assessment of the risks the mitigation measures aim to alleviate, reliance on mitigation cannot be reasonably relied on to control the un-assessed risk. Indeed, under FIFRA’s risk/benefit standard for determining whether a pesticide poses unreasonable adverse effects, the risks to pollinators alone that are associated with neonicotinoid use as a seed treatment may outweigh any benefit when used on seeds – a calculation that is determinable only if EPA actually assesses the risk associated with dust-off from treated seeds.

The Assessment also failed to evaluate the risk of simultaneous exposure to multiple neonicotinoids and other insecticides, herbicides, fungicides, or other chemicals used in agricultural production for cumulative or synergistic effects. Tsvetkov et al. (2017) shows that both clothianidin and thiamethoxam become nearly twice as toxic to bees when the bees are also exposed in the field to a commonly used fungicide. The U.S. Geological Survey has established, through in-field studies, that nearly 50% of native bees tested have been exposed to two or more

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<sup>29</sup> Assessment at 7, *see also id.* at 362.

<sup>30</sup> Tsvetkov N., et al., (2017). Chronic exposure to neonicotinoids reduces honey bee health near corn crops. *Science* 356, 1395–1397.

<sup>31</sup> For instance, the Province of Ontario, Canada, evaluated the effectiveness of mitigation measures and in 2016 issued “Ontario’s Pollinator Health Action Plan,” an action plan for clothianidin, thiamethoxam and imidacloprid. Significantly, Ontario’s plan aims to reduce the use of neonicotinoid treated corn and soybean seeds by 80%. Ministry of Agriculture, Food, and Rural Affairs (2016). Ontario’s Pollinator Health Action Plan, *available at* [http://www.omafra.gov.on.ca/english/pollinator/action\\_plan.htm](http://www.omafra.gov.on.ca/english/pollinator/action_plan.htm).

pesticides.<sup>32</sup> Without question, bees are exposed to more than one pesticide. Indeed, a United States Government Accountability Office (GAO) report urged EPA to identify the most common mixtures of pesticides used on crops so that EPA is able to assess the cumulative or synergistic effects of commonly-used pesticide mixtures.<sup>33</sup>

Further, the Assessment failed to assess other combinations of exposure: 1) the aggregate risk of exposure to one neonicotinoid caused by multiple routes of exposure, i.e., risk to a bee exposed to clothianidin during, for example, dust off at planting, and foliar spray later in the season, and 2) the cumulative risk of exposure to more than one neonicotinoid, which the EPA simply stated it would not perform<sup>34</sup> despite these combinations posing real risks to pollinators.

Taken together, the shortcomings of the Assessment demonstrate that, in reviewing the registrations of clothianidin and thiamethoxam, EPA has utterly failed to properly assess the particular risks of exposure to seeds treated with those pesticides. Thus, any rationale for exempting neonicotinoid-treated seeds from the registration requirements of FIFRA based on application of the treated article exemption, which assumes that EPA has adequately regulated such risks in registration of the treating pesticide, must fail.

#### IV. Conclusion

Because EPA failed to adequately assess the risks to pollinators posed by seeds treated with clothianidin and thiamethoxam in its registration review of those pesticides, any application of the treated article exemption to such treated seeds is contrary to the purposes and intent of FIFRA and EPA's interpretation of its authority to create such exemption. NYAG therefore requests that EPA fully enforce FIFRA's registration and labeling requirements for such seeds as pesticides.

Sincerely,

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By:   
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<sup>32</sup> Hladik, M.L., M. Vandever, K.L. Smalling. (2016). Exposure of Native Bees Foraging in an Agricultural Landscape to Current-Use Pesticides. *Science of the Total Environment* 542(A): 469-477.

<sup>33</sup> GAO, Bee Health: USDA and EPA Should Take Additional Actions to Address Threats to Bee Populations (Feb. 2016). GAO-16-220.

<sup>34</sup> Assessment at 5.

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**SUBMITTED VIA ELECTRONIC MAIL**

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Re: *Comments of the Attorney General of the State of New York on  
EPA's Preliminary Bee Risk Assessment to Support the  
Registration Review of Clothianidin and Thiamethoxam  
(82 Fed. Reg. 24,113)*

Clothianidin Docket ID Number EPA-HQ-OPP-2011-0865  
Thiamethoxam Docket ID Number EPA-HQ-OPP-2011-0581

Dear Mr. Dumas:

Pursuant to our July 24, 2017, telephone conversation, the Attorney General of the State of New York ("NYAG") submits these comments on the United States Environmental Protection Agency's ("EPA") January 5, 2017, Preliminary Bee Risk Assessment to Support the Registration Review of Clothianidin and Thiamethoxam, 82 Fed. Reg. 24,113 (May 25, 2017).

## I. Introduction

For the reasons discussed below, the Preliminary Risk Assessment has material deficiencies and in its present form cannot support a finding that clothianidin and thiamethoxam “will not generally cause unreasonable adverse effects on the environment” under Section 3(c)(5) of the Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”). 7 U.S.C. § 136a(c)(5). First, the assessment fails to examine risks to pollinators from exposure to treated seed dust created during the planting of treated seeds, despite EPA’s acknowledgement that dust from treated seeds “has been associated with numerous incidents of honey bee mortality.” (pp. 42.) Second, to justify the failure to address dust-off created during the planting of treated seeds, the assessment seeks to rely on mitigation measures that the agency has not identified. EPA, however, cannot establish the effectiveness of mitigation measures without first assessing the risks from dust-off and then identifying the appropriate measures necessary to mitigate risks. Third, the assessment fails to assess cumulative, synergistic, and aggregate risks of exposure to clothianidin and thiamethoxam.

Accordingly, NYAG urges EPA to consider the additional information provided here and thoroughly assess the risks to bees and other pollinators posed by the continued use of clothianidin and thiamethoxam before re-registering these pesticides and approving uses that pose substantial risks to bees and other pollinators.

## II. New York’s Interest

Since 2006, honey bee colony loss in the United States has been severe and the urgency to stop precipitous losses cannot be overstated. Indeed, between 2012 and 2017 total annual colony losses nationally ranged from 33.2% to 45.2%.<sup>1</sup> In New York State alone,<sup>2</sup> beekeepers experienced a 43.78% total annual colony loss in 2016-2017,<sup>3</sup> while colony losses of commercial migratory bees based in the State have exceeded 70%.<sup>4</sup> In 2015, the U.S. Department of Agriculture and EPA declared the national honey bee colony losses unacceptable and set a ten-

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<sup>1</sup> Steinhauer, N.A., et al. (2014). A national survey of managed honey bee 2012–2013 annual colony losses in the USA: results from the Bee Informed Partnership 2012–2013. *Journal of Apicultural Research*, 53(1), 1–18 DOI: 10.3896/IBRA.1.53.1.01; Lee, K.V., et al. (2015). A national survey of managed honey bee 2013–2014 annual colony losses in the USA. *Apidologie*, 46:292-305 DOI: 10.1007/s13592-015-0356-z; Seitz, N., et al. (2016). A national survey of managed honey bee 2014–2015 annual colony losses in the USA. *Journal of Apicultural Research*, 54:4 DOI:10.1080/00218839.2016.1153294; Steinhauer N., et al. “Colony Loss 2015-2016: Preliminary Results” (May 4, 2016). Available at: <https://beeinformed.org/results/colony-loss-2015-2016-preliminary-results/>; Steinhauer, N., et al. “Honey Bee Colony Losses 2016-2017: Preliminary Results” (May 25, 2017). Available at: <https://beeinformed.org/2017/05/25/2016-2017-loss-results-thank-you-to-all-survey-participants/>

<sup>2</sup> New York has not registered clothianidin for any agricultural use, based in part on its finding that the pesticide is “highly toxic to bees on an acute oral and contact basis.” New York State Department of Environmental Conservation, November 16, 2005 Letter Re: *Withdrawal of Application for Registration of the New Product Poncho 600 (EPA Reg. No. 264-789-7501) Which Contains the New Active Ingredient Clothianidin*.

<sup>3</sup> Preliminary: 2016-2017 State Total and Average Losses. (May 26, 2017). Available at: <https://beeinformed.org/2017/05/26/preliminary-2016-2017-state-total-and-average-losses/>.

<sup>4</sup> New York State Department of Environmental Conservation and Department of Agriculture and Markets. *New York State Pollinator Protection Plan* (June 24, 2016), p. 4. Available at: [http://www.dec.ny.gov/docs/administration\\_pdf/nyspollinatorplan.pdf](http://www.dec.ny.gov/docs/administration_pdf/nyspollinatorplan.pdf)

year goal to reduce losses during winter to no more than 15%.<sup>5</sup> To address these losses in New York, in 2016 the New York State Departments of Environmental Conservation and Agriculture and Markets developed the “New York State Pollinator Protection Plan,” which aims “to promote the health and recovery of pollinator populations in New York State in order to sustain the state’s robust agricultural economy and unparalleled natural resources.”<sup>6</sup>

Indeed, in the United States, honey bees, wild bees, and other insect pollinators provide ecological services critical to maintaining agricultural crop values of over fifteen billion dollars.<sup>7</sup> Many of New York’s seven million acres of agricultural crops, including apples, cabbage, berries, and pumpkins, rely on insect pollination, either from approximately 80,000 managed pollinator colonies in the State, or from New York’s 450 wild pollinator species.<sup>8</sup> Pollinator loss threatens agricultural production and natural plant communities across New York, the United States, and the world.

### III. Background

#### A. FIFRA’s Standard for Pesticide Registration

Under FIFRA, all pesticides must be registered before their sale, distribution, or use in the United States. 7 U.S.C. § 136a(a). The EPA Administrator may only register a pesticide if it will not cause “unreasonable adverse effects on the environment.” 7 U.S.C. § 136a(c)(5). FIFRA defines “unreasonable adverse effects on the environment” as “any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide . . .” 7 U.S.C. § 136(bb) (emphasis added). This “unreasonable adverse effects” language thus creates a “risk-benefit” standard wherein EPA must compare the risks presented by a pesticide’s use with the benefits to society from that use. If a pesticide causes unreasonable adverse effects on the environment, it cannot be registered for use. 7 U.S.C. § 136d(b). EPA is required to review again each registered pesticide by October 1, 2022, or “the date that is 15 years after the date on which the first pesticide containing a new active ingredient is registered,” whichever date is later. 7 U.S.C. §§ 136a(g)(1)(A)(i), 136a(g)(1)(A)(iii).

EPA conditionally registered thiamethoxam in 1999 and clothianidin in 2003 based upon minimal data and information from the registrant regarding ecological impacts.<sup>9</sup>

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<sup>5</sup> U.S. Department of Agriculture and U.S. Environmental Protection Agency. Pollinator Health Task Force’s *National Strategy to Promote the Health of Honey Bees and Other Pollinators* (May 19, 2015). Available at: <https://obamawhitehouse.archives.gov/sites/default/files/microsites/ostp/Pollinator%20Health%20Strategy%202015.pdf>; Bee Informed reports total colony loss in the winters ranging from 22% to 36% between 2006-2016. See: Steinhauer N., et al. “Colony Loss 2015-2016: Preliminary Results” (May 4, 2016). Available at: <https://beeinformed.org/results/colony-loss-2015-2016-preliminary-results/>.

<sup>6</sup> *New York State Pollinator Protection Plan*, p. 1, *supra* note 4.

<sup>7</sup> Calderone, N. W. (2012). Insect Pollinated Crops, Insect Pollinators and US Agriculture: Trend Analysis of Aggregate Data for the Period 1992–2009. *PLoS ONE* 7:5, e37235.

<sup>8</sup> *New York State Pollinator Protection Plan*, pp. 5-6, *supra* note 4.

<sup>9</sup> U.S. Environmental Protection Agency, Thiamethoxam Final Work Plan; Registration Review Case No. 7641 (June 2011). Available at <https://www.regulations.gov/document?D=EPA-HQ-OPP-2011-0581-0024>; U.S. Environmental Protection Agency, Clothianidin Conditional Registration (May 30, 2003). Available at: [https://www3.epa.gov/pesticides/chem\\_search/reg\\_actions/registration/fs\\_PC-044309\\_30-May-03.pdf](https://www3.epa.gov/pesticides/chem_search/reg_actions/registration/fs_PC-044309_30-May-03.pdf).

## **B. Use and Impacts of Seeds Treated with Clothianidin and Thiamethoxam**

### **1. Seed Treatment is the Predominant Use of Clothianidin and Thiamethoxam in the United States**

Clothianidin and thiamethoxam are neonicotinoid pesticides that affect the central nervous system of insects, resulting in nervous stimulation, paralysis, and death. They are systemic pesticides, meaning that once absorbed by the plant, the neonicotinoid moves throughout the plant's vascular system, exposing insects feeding on the plant to the pesticide. Neonicotinoids are highly toxic to non-target species including critical pollinators such as honey bees and other bee species.

The Preliminary Risk Assessment reveals that seed treatments constitute the most significant agricultural use of clothianidin and thiamethoxam when considering annual pounds of active ingredient. Clothianidin seed treatment usage is estimated at 1,458,000 pounds of active ingredient per year, whereas 25,000-35,500 pounds per year are used in foliar and soil applications. Thiamethoxam seed treatment usage is estimated at 792,000 pounds per year, whereas 121,000-132,500 pounds per year are used in foliar and soil applications. (pp. 34-35, Tables 2.4, 2.5.) Combined clothianidin and thiamethoxam seed treatment annual use is thus at least thirteen times greater than both foliar and soil use combined. Additionally, the assessment shows that the number of acres planted with treated seeds for predominant agricultural commodities is also significant. For example, in 2016, for corn and soybean crops – the two most widely planted crops in the United States – EPA estimated that 66 million acres of treated corn seed were planted out of 94.1 million total acres planted, while 15.1 million acres of treated soybean seed were planted out of 83.7 million total acres planted. (p. 35, Table 2.6.)

Despite the pervasive prophylactic use of treated seeds, according to EPA that use does not improve soybean crop production or crop yields compared to areas planted with non-treated seeds. On October 15, 2014, EPA released an analysis questioning the benefits of soybean treated seeds and concluding that treated soybeans “provide negligible overall benefits to soybean production in most situations . . . in most cases there is no difference in soybean yield when soybean seed was treated with neonicotinoids versus not receiving any insect control treatment.”<sup>10</sup> Studies have also shown no crop yield benefit of planting neonicotinoid-treated corn seed.<sup>11</sup>

### **2. Dust from Seeds Treated with Clothianidin and Thiamethoxam Causes Adverse Effects on Non-Target Species, Such as Bees**

The Preliminary Risk Assessment itself cites to several studies that reflect the exposure

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<sup>10</sup> U.S. Environmental Protection Agency. “Benefits of Neonicotinoid Seed Treatments to Soybean Production” (October 15, 2014). Available at: [http://www2.epa.gov/sites/production/files/2014-10/documents/benefits\\_of\\_neonicotinoid\\_seed\\_treatments\\_to\\_soybean\\_production\\_2.pdf](http://www2.epa.gov/sites/production/files/2014-10/documents/benefits_of_neonicotinoid_seed_treatments_to_soybean_production_2.pdf).

<sup>11</sup> Krupke, C.H., Holland, J. D., Long, E. Y., and Eitzer, B. D. (2017). Planting of neonicotinoid-treated maize poses risks for honey bees and other non-target organisms over a wide area without consistent crop yield benefit. *Journal of Applied Ecology* doi: 10.1111/1365-2664.12924.

impacts from seed coatings.<sup>12</sup> Additional field studies not included in the assessment also demonstrate that neonicotinoid exposure causes significant harm to pollinator health:

- Tsvetkov et al. (2017) shows that despite the mandated use of dust-reducing seed lubricants during planting, honey bee colonies located near corn fields planted with neonicotinoid-treated seeds are chronically exposed to the neonicotinoids not just during dust-off, but for months. Exposure to neonicotinoids decreased survival of bees and fitness of colonies, and of additional serious concern, both clothianidin and thiamethoxam show synergistic effects and become nearly twice as toxic to bees when the bees are also exposed to a commonly used fungicide, boscalid.<sup>13</sup>
- Woodcock et al. (2017), a large real-world experiment on exposure from commercially available treated seeds planted in fields across three European countries, shows exposure to clothianidin or thiamethoxam via seed treatment reduces overwintering success and colony reproduction in nearby bee colonies.<sup>14</sup>
- Marzaro et al. (2011) and Girolami et al (2012) documented that contact with abraded seed dust during planting of neonicotinoid-treated corn seeds was fatal to bees, especially in high humidity environments.<sup>15</sup> Another Italian study showed that abraded seed dust migrated off the agricultural field, and grass and flowers from surrounding fields tested positive for neonicotinoid contamination, even when a seed coating was used to reduce abrasion and dust-off.<sup>16</sup>

#### **IV. The Assessment Fails to Examine the Risks to Bees and other Pollinators, Including Threatened and Endangered Species, from Exposure to Treated Seed Dust**

The Preliminary Risk Assessment is “intended to account for the major routes of pesticide exposure that are relevant to bees (i.e. through diet and contact).” (p. 48.) Nonetheless, although seed treatments are the predominant application method of clothianidin and thiamethoxam, and the assessment (pp. 7, 42) identifies abraded seed coat dust as an “important

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<sup>12</sup> Forster, R. (2009). Bee poisoning caused by insecticidal seed treatment of maize in Germany in 2008. Pages 126 – 131 in P. A. Oomen and H. M. Thompson (editors) *Hazards of Pesticides to Bees*, 10th International Symposium of the ICP-BR Bee Protection Group, Bucharest (Romania), October 8 – 10, 2008. Julius Kühn Arch 423; Krupke, C. H., Hunt, G.J., Eitzer, B.D., Andino, G., and Given, K. (2012). Multiple routes of pesticide exposure for honey bees living near agricultural fields. *PLoS ONE* 7(1): e29268. Doi:10.1371/journal.pone.0029268; Tapparo, A. D., et al. (2012). Assessment of the environmental exposure of honey bees to particulate matter containing neonicotinoid insecticides coming from corn-coated seeds. *Environmental Science and Technology* 46: 2592 - 2599.

<sup>13</sup> Tsvetkov N., et al. (2017). Chronic exposure to neonicotinoids reduces honey bee health near corn crops. *Science* 356, 1395–1397.

<sup>14</sup> Woodcock B.A., et al. (2017). Country-specific effects of neonicotinoid pesticides on honey bees and wild bees. *Science* 356, 1393–1395.

<sup>15</sup> Marzaro, M., et al. (2011). Lethal aerial powdering of honey bees with neonicotinoids from fragments of maize seed coat. *Environ Sci Technol* 46:2592-2599; Girolami, V., et al. (2012). Fatal powdering of bees in flight with particulates of neonicotinoids seed coating and humidity implication. *J. Appl Entomol* 136:17-26.

<sup>16</sup> Greatti M., Barbattinni R., Stravisi A., Sabatini A.G., and Rossi S. (2006). Presence of the a.i. imidacloprid on vegetation near corn fields sown with Gaucho dressed seeds. *Bulletin of Insectology* 59(2):99-103.

route of exposure” and “a route of concern,” the assessment fails to examine the risks associated with contact with, and off-site movement of, seed coat dust and residue.

Rather, EPA “assumed that bees are not present until after planting; therefore, contact exposures would not reasonably be expected to occur” and “exposure through consumption of residues in nectar and pollen [is] expected to be the dominant route.” (pp. 347, 48.) These assumptions are contrary to academic analyses that demonstrate, e.g., that “the influence of planting neonicotinoid treated maize seeds is likely to be pervasive ... [and] the overwhelming majority of honey bee foragers in our study area are likely to come in contact with neonicotinoid residues from planter dust.”<sup>17</sup> In the assessment, EPA adopts these assumptions as fact by stating “[r]elatively speaking, exposures from foliar and soil applications are greater compared to those from seed treatments.” (p. 365.)

EPA is mandated to assess the potential risks of all recognized exposure routes. Clearly, an exposure route that is, according to EPA itself, the predominant application method of clothianidin and thiamethoxam by volume of active ingredient, should be included in the assessment. To be sure, the recent substantial increase in neonicotinoid use is a reflection of the growing use of large-scale prophylactic seed treatment application on field crops,<sup>18</sup> and must be evaluated.

In addition to bees, the assessment also fails to assess the risks of clothianidin and thiamethoxam exposure to non-bee pollinators including hover flies and bee flies (Bombyliidae family).<sup>19</sup> Those species are demonstrated crop pollinators in agricultural settings. Researchers have also found that non-target species are exposed to neonicotinoids from contaminated plants growing adjacent to agricultural fields, including monarch butterflies exposed to clothianidin-contaminated milkweed.<sup>20</sup> Likewise, the assessment fails to consider impacts to pollinators that are federal endangered and threatened species, such as the recently listed Rusty Patched Bumble bee (*Bombus affinis*, listed March 21, 2017). Indeed, the Federal Register Notice announced the availability of the assessment by calling it the “Combined Preliminary *Pollinator* Risk Assessment for Clothianidin and Thiamethoxam,”<sup>21</sup> while EPA’s “Schedule for Review of Neonicotinoid Pesticides” discusses the potential issuance of the “Preliminary *Pollinator*-Only Risk Assessment” as well as “Potential Early *Pollinator* Mitigation in 2017.”<sup>22</sup> (Emphasis

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<sup>17</sup> Krupke, C.H., Holland, J.D., Long, E.Y., and Eitzer, B.D. (2017). Planting of neonicotinoid-treated maize poses risks for honey bees and other non-target organisms over a wide area without consistent crop yield benefit. *Journal of Applied Ecology* doi: 10.1111/1365-2664.12924.

<sup>18</sup> Douglas, M.R. and Tooker, J.F. (2015). Large-scale deployment of seed treatments has driven rapid increase in use of neonicotinoid insecticides and preemptive pest management in U.S. field crops. *Environ. Sci. Technol.* 49, 5088–5097.

<sup>19</sup> Klein, A., Brittain, C., Hendrix, S.D., Thorp, R., Williams, N., and Kremen, C. (2012). Wild pollination services to California almond rely on semi-natural habitat. *Journal of Applied Ecology*, 49:723-732; Orford, K.A., Vaughan, I.P., and Memmott, J. (2015). The forgotten flies: the importance of non-syrphid Diptera as pollinators. *Proc. R. Soc. B* 282:20142934.

<sup>20</sup> Pecenka, J.R. and Lundgren, J.G. (2015). Non-target effects of clothianidin on monarch butterflies. *Sci. Nat.* 102:19. DOI 10.1007/s00114-015-1270-y.

<sup>21</sup> 82 Fed. Reg. 24,113.

<sup>22</sup> EPA’s Schedule for Review of Neonicotinoid Pesticides, last updated May 23, 2017. Available at: <https://www.epa.gov/pollinator-protection/schedule-review-neonicotinoid-pesticides> on 7/21/2017. NYAG notes

added.) The scope of the assessment should include the risks from clothianidin and thiamethoxam, to all affected pollinators, not just bees.

**V. The Assessment Relies on Unidentified Mitigation Measures that May Be Ineffective Absent a Complete Assessment of Risks from Treated Seeds**

In the Preliminary Risk Assessment, EPA justifies its exclusion of seed treatment as an exposure pathway by positing that EPA may require mitigation measures. But those measures are not identified in the assessment. After conceding in the assessment that: “[e]xposure of bees to clothianidin and thiamethoxam via drift of abraded seed coat dust, is considered a route of concern given that bee kill incidents have been associated with planting of clothianidin- or thiamethoxam-treated corn,” EPA continues:

*However, the Agency is working with different stakeholders to identify best management practices and to promote technology-based solutions that reduce this potential route of exposure. As such, this exposure route was not quantitatively considered in this assessment.* (Emphasis added.)

Logically, however, without having assessed the *risk* to bees from their contact with clothianidin and thiamethoxam through dust-off during planting, it is impossible for EPA to determine whether mitigation will reduce risk associated with exposure to treated seeds below levels of concern.

Importantly, EPA’s mitigation approach in this assessment was rejected by the Ninth Circuit Court of Appeals in *Pollinator Stewardship Council v. United States EPA*, No. 13-72346, 2015 U.S. App. LEXIS 19945, at \*17-21 (9th Cir. Nov. 12, 2015). In that case, the court vacated EPA’s registration of another pesticide, sulfoxaflor, in part because EPA had improperly relied on un-assessed mitigation measures to justify its registration of sulfoxaflor, which EPA had previously classified as “very highly toxic to bees.” The court found that EPA’s decision to register sulfoxaflor was not supported by substantial evidence on the record. Specifically, the court held that the “lack of any meaningful study of the effects of the mitigation measures” warranted remand to the agency. *Id.* at \*23. The court found that “[w]ithout sufficient data, the EPA has no real idea whether sulfoxaflor will cause unreasonable adverse effects on bees, as prohibited by FIFRA.” *Id.* at \*25. (Emphasis added.) The Ninth Circuit’s reasoning in that case applies with equal force here. Measures relied on to reduce risks must be preceded by an examination of the actual risks to be mitigated.

Moreover, peer-reviewed studies raise concerns that mitigation measures envisioned by EPA may not be effective in reducing the risk of exposure. Tapparo et al. (2012) states:

[A]nalytical results regarding factor emissions, air concentration of insecticide around the drilling machine and consequent bee contamination, reveal that all kinds of the tested seed coatings (also those more recently proposed) do not prevent the dispersion of large amounts of micrometric particles containing the insecticide, producing lethal exposure of

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that the document entitled “Potential Early Pollinator Mitigation in 2017” implies that EPA intends for a proposed mitigation plan to be forthcoming, but no such document has yet been issued.

[sic] flying bees. Moreover, the modifications of the air outlet of drilling machines so far adopted seem to have a limited effect on both the factor emission and the effective bee contamination.

More recently, Tsvetkov et al. (2017) confirmed that in Canadian cornfields, the use of dust-reducing seed lubricants during planting did not prevent exposure to a toxicologically significant level of neonicotinoids.<sup>23</sup>

While mitigation should certainly be part of the solution for reducing risks from pesticide use,<sup>24</sup> without a full assessment of the risks the mitigation measures aim to alleviate, reliance on mitigation cannot support re-registration. Indeed, under FIFRA's risk/benefit standard for determining whether a pesticide poses unreasonable adverse effects, the risks to pollinators alone that are associated with neonicotinoid use as a seed treatment may outweigh any benefit when used on seeds – which can only be determined if EPA actually assesses the risk associated with dust-off from treated seeds.

## **VI. The Assessment Fails to Assess Cumulative, Synergistic, and Aggregate Risks of Exposure to Neonicotinoids**

The Preliminary Risk Assessment also fails to evaluate the cumulative and synergistic risks of simultaneous exposure to multiple neonicotinoids and to other insecticides, herbicides, fungicides, or other chemicals used in agricultural production.<sup>25</sup> As noted above, Tsvetkov et al. (2017) shows that both clothianidin and thiamethoxam become nearly twice as toxic to bees when the bees are also exposed in the field to a commonly used fungicide. The U.S. Geological Survey has established, through in-field studies, that nearly 50% of native bees tested have been exposed to at least two or more pesticides.<sup>26</sup> Without question, bees are exposed to more than one pesticide. Indeed, a GAO report charges the EPA to identify the most common mixtures of pesticides used on crops, enabling EPA to assess cumulative or synergistic effects of commonly-used pesticide mixtures.<sup>27</sup>

Further, the assessment fails to evaluate the risk of other combinations of exposure, including: 1) the aggregate risk of exposure to one neonicotinoid caused by multiple routes of exposure, e.g., the risk to bees exposed to clothianidin during treated seed planting, and also exposed to foliar spray; and 2) the cumulative risk of exposure to more than one neonicotinoid, which evaluation EPA simply states it is not undertaking (p. 5) – despite these combinations

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<sup>23</sup> Tsvetkov N., et al., (2017). Chronic exposure to neonicotinoids reduces honey bee health near corn crops. *Science* 356, 1395–1397.

<sup>24</sup> For instance, in 2016 the Province of Ontario, Canada, included mitigation within their action plan for clothianidin, thiamethoxam, and imidacloprid. NYAG specifically notes that Ontario's plan aims to reduce the use of neonicotinoid-treated corn and soybean seeds by 80%. Ministry of Agriculture, Food, and Rural Affairs (2016). *Ontario's Pollinator Health Action Plan*. Available at: [http://www.omafr.gov.on.ca/english/pollinator/action\\_plan.htm](http://www.omafr.gov.on.ca/english/pollinator/action_plan.htm).

<sup>25</sup> Tsvetkov N., et al. (2017), *supra* note 23.

<sup>26</sup> Hladik, M.L., Vandever, M., Smalling, K.L. (2016). Exposure of Native Bees Foraging in an Agricultural Landscape to Current-Use Pesticides. *Science of the Total Environment* 542(A): 469-477.

<sup>27</sup> United States Government Accountability Office. *Bee Health: USDA and EPA Should Take Additional Actions to Address Threats to Bee Populations*. February 2016. GAO-16-220.

posing real risks to pollinators. The assessment provides no rationale for EPA's failure to address these combinations of exposure.

## VII. Conclusion

FIFRA requires the EPA Administrator to determine, before re-registering any pesticide, that the pesticide, when used in its commonly recognized method, can perform its intended function without unreasonable adverse effects on the environment. NYAG requests that EPA undertake a full review of the risks and adverse effects of clothianidin and thiamethoxam on bees and other vitally important pollinators. If, after a full assessment, those adverse effects and risks from seed treatment outweigh the crop yield benefits, EPA must take appropriate regulatory action in this re-registration process.

Very truly yours,



Rebecca Fromer  
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Environmental Protection Bureau  
(212) 416-8132

/S/ Maureen Leary

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Assistant Attorney General  
Environmental Protection Bureau  
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**From:** Dumas, Richard <[Dumas.Richard@epa.gov](mailto:Dumas.Richard@epa.gov)>  
**Sent:** Wednesday, August 9, 2017 12:45 PM  
**To:** Rebecca Fromer <[Rebecca.Fromer@ag.ny.gov](mailto:Rebecca.Fromer@ag.ny.gov)>  
**Subject:** RE: NYAG Comments on EPA's Preliminary Bee Risk Assessment to Support the Registration Review of Clothianidin and Thiamethoxam (82 Fed. Reg. 24,113)

I did forward to the primary CRM and branch Chief leading many of the pollinator efforts. I also sent the document to the docket staff and requested that they post it along with other comments. I had asked that they let me know either way about loading the comments and I have not heard back from them. So the bottom line, the right people in OPP have your comments and it is still not clear if they will be formally posted along with other comments.

Rich

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Richard P. Dumas  
Senior Policy Adviser  
Pesticide Re-evaluation Division  
Office of Pesticide Programs  
U.S. Environmental Protection Agency

703-308-8015

**From:** Rebecca Fromer [<mailto:Rebecca.Fromer@ag.ny.gov>]  
**Sent:** Wednesday, August 09, 2017 12:27 PM  
**To:** Dumas, Richard <[Dumas.Richard@epa.gov](mailto:Dumas.Richard@epa.gov)>  
**Cc:** Maureen F. Leary <[Maureen.Leary@ag.ny.gov](mailto:Maureen.Leary@ag.ny.gov)>; Jennifer Nalbone <[Jennifer.Nalbone@ag.ny.gov](mailto:Jennifer.Nalbone@ag.ny.gov)>  
**Subject:** RE: NYAG Comments on EPA's Preliminary Bee Risk Assessment to Support the Registration Review of Clothianidin and Thiamethoxam (82 Fed. Reg. 24,113)

Dear Mr. Dumas:

I just wanted to confirm your receipt of my July 31 email below, to which I attached NYAG's comments on EPA's *Preliminary Bee Risk Assessment to Support the Registration Review of Clothianidin and Thiamethoxam*. Could you please let us know if these comments were transmitted to the appropriate chemical review managers, and if they will be uploaded to the docket?

Thank you very much for your time and courtesy.

Very truly yours,

Rebecca Fromer

**From:** Rebecca Fromer  
**Sent:** Monday, July 31, 2017 10:25 PM  
**To:** 'dumas.richard@epa.gov' <[dumas.richard@epa.gov](mailto:dumas.richard@epa.gov)>

**Cc:** Maureen F. Leary <Maureen.Leary@ag.ny.gov>; Jennifer Nalbone <Jennifer.Nalbone@ag.ny.gov>  
**Subject:** NYAG Comments on EPA's Preliminary Bee Risk Assessment to Support the Registration Review of Clothianidin and Thiamethoxam (82 Fed. Reg. 24,113)

Dear Mr. Dumas:

Please find attached comments submitted by the Attorney General of the State of New York on EPA's *Preliminary Bee Risk Assessment to Support the Registration Review of Clothianidin and Thiamethoxam* (82 Fed. Reg. 24,113). These comments are being transmitted electronically to you pursuant to our July 24, 2017, telephone conversation.

Thank you for your consideration.

Very truly yours,

Rebecca Fromer  
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